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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/820,176

04/06/2004

Bernard R. Pierce

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EXAMINER

ZHE, MENG YAO

ART UNIT

PAPER NUMBER

2195

NOTIFICATION DATE

DELIVERY MODE

03/31/2009

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

usptopatentmail@cantorcolburn.com

Office Action Summary	Application No. 10/820,176	Applicant(s) PIERCE ET AL.	
	Examiner MENG YAO ZHE	Art Unit 2195	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 6/24/2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>4/6/2004</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-18 are presented for examination.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

A. The following claim languages are not clear and indefinite:

- i) Claim 1, it is uncertain what the relationship is between “an initial priority bar” of line 5 and “a priority bar” of line 8 <i.e. did the initial priority bar get set to the later said priority bar?>.

Claims 7, 13 have the same deficiencies as claim 1 above.

- ii) Claim 4, it is uncertain what a priority vector is. Furthermore, it is uncertain how the initial priority bar is determined differently from the priority bar <i.e. they both seemed to be based on the priority limit and the

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highest priority of the secondary queue. Are they supposed to be the same thing?>

Claim 10, 16 have the same deficiencies as claim 4 above.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smith, Patent No. 6,895,585 (hereafter Smith) in view of Hori, Patent No. 5,187,678 (hereafter Hori).

6. As per claims 1, 4, 7, 10, 13, 16 Smith teaches a method of searching for work elements for processing in a computing system having a queue of work elements (Column 7, lines 38-42), a numerical priority value being associated with each of said work elements (Column 6, lines 45-60), the method comprising:

Setting an initial priority bar (Column 7, lines 7-13);

Processing work elements until reaching a work element having a priority less than said initial priority bar (Column 7, lines 32-35);

If the system contains a work element having a priority greater than or equal to said initial priority bar, processing said work element (Column 7, lines 32-46);

If the system contains a work element having a priority less than said initial priority bar, processing another work element (Column 7, lines 32-55).

Smith does not specifically teach work elements are distributed on two separate queues and setting a priority bar equal to a minimum of a priority limit and a highest priority on said at least one secondary queue.

However Smith does teach a deferred request queue which temporarily queues work elements of having priorities less than the threshold (Column 7, lines 38-42). It would have been obvious to one having ordinary skill in the art at the time of the applicant's invention to have a queue for all incoming requests, since in the art of task management, requests are all put in a queue for the purpose of maintaining proper sequence of processing, and to have a deferred request queue that only queues work elements below the priority threshold, as taught by Smith, such that work elements are distributed on two separate queues.

Furthermore, Hori teaches a comparator that takes the minimum of two values for the purpose of having the ability to compare and select an input given multiple inputs.

It would have been obvious to one having ordinary skill in the art at the time of applicant's invention to modify the teachings of Smith with a comparator that sets the output to the minimum of two values, as taught by Hori, such that the priority bar may be equal to the minimum of a priority limit, which is the initial priority bar taught by Smith

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and the highest priority of a work element from the deferred request queue, because it allows one to compare and select a priority given multiple priority inputs.

7. As per claim 2, 8, 14, Smith teaches wherein said work elements are arranged in each of said primary queue (Column 7, lines 38-42).

Smith does not specifically teach said at least one secondary queue in descending priority order. However, since organizing elements in a queue in descending priority order is commonly practiced in the field of task management for the purpose of task processing according to priority, it would have been obvious to one having ordinary skill in the art at the time of the applicant's invention to modify the teachings of Smith with a queue organized in descending priority order in order to process tasks efficiently according to their priorities.

8. As per claims 3, 9, 15, Smith teaches wherein determining said initial priority bar is determined based on a priority limit and a priority vector (Column 7, lines 7-13).

9. As per claims 5, 11, 17, Smith in view of Hori does not specifically teach wherein a priority value in said priority vector for said primary queue is initially set to zero.

However, since initializing priority values to zero is commonly practiced in the field of task processing for the purpose of setting, resetting, and initializing value indicators in order to keep track of changes in a system, it would have been obvious to one having ordinary skill in the art at the time of the applicant's invention to modify the

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teachings of Smith with setting the priority value to zero in order to track changes in the system.

10. As per claim 6, 12, 18, Smith in view of Hori does not specifically teach if said primary queue has no work elements, setting a maximum priority value for said primary queue to -1.

However, setting a tracking value to a negative number, which includes -1, is commonly practiced in the field of task management for the purpose of having an obvious indicator or flag to show that an event is an exceptional case, such as an empty queue. Therefore, it would have been obvious to one having ordinary skill in the art at the time of the applicant's invention to modify the teachings of Smith with an indicator of -1 for priority when the queue is empty.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MENGYAO ZHE whose telephone number is (571)272-6946. The examiner can normally be reached on Monday Through Friday, 7:30 - 5:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on 571-272-3756. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/VAN H NGUYEN/

Primary Examiner, Art Unit 2194